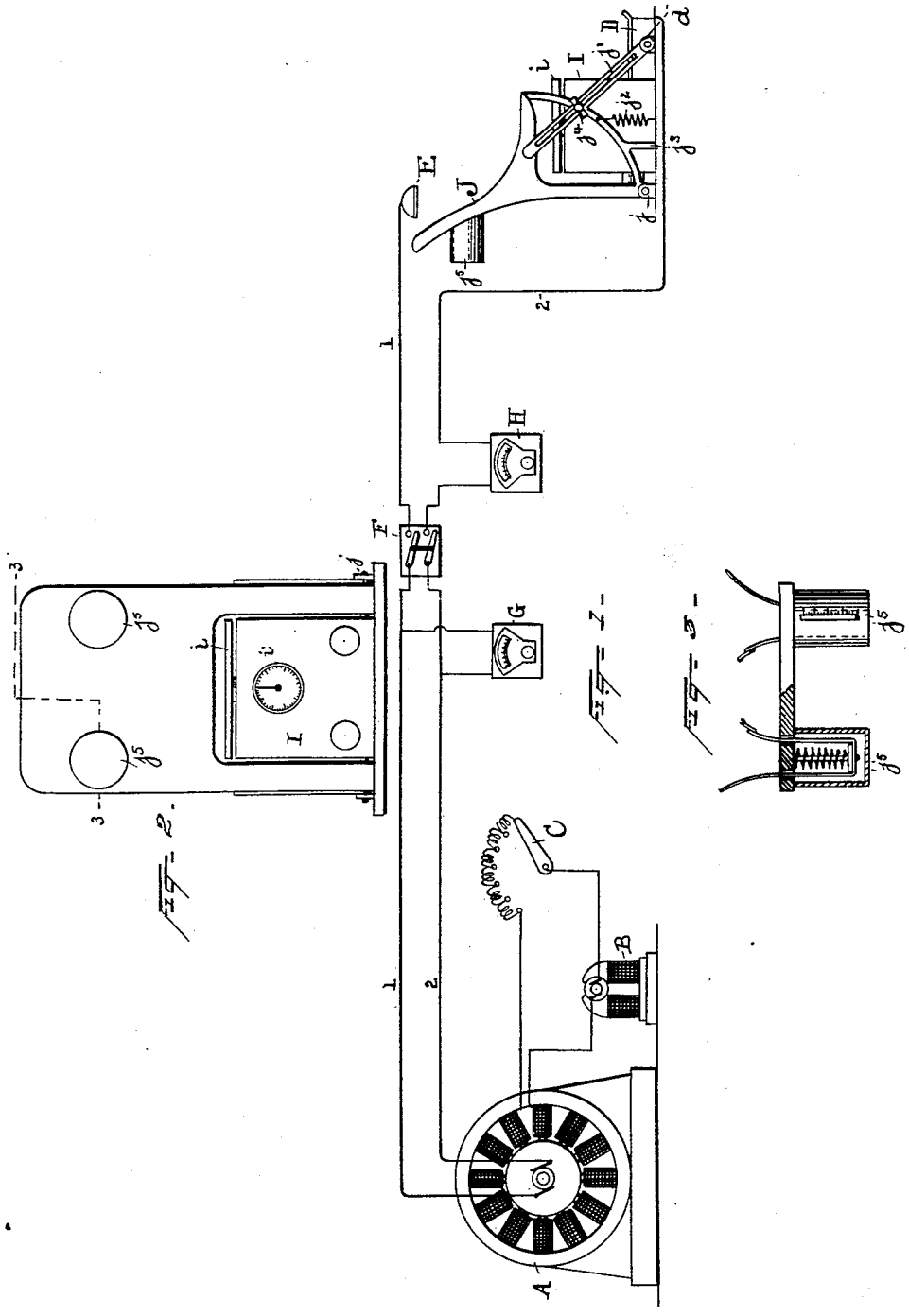
(No Model.)

E. F. DAVIS.

ELECTROCUTION CHAIR.

No. 587,649. Patented Aug. 3, 1897.



Witnesses
Norris R. Clark.
Jno. R. Taylor

Inventor
Edwin F. Davis,
By his Attorneys
Dyer & Driscoll

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWIN F. DAVIS, OF WEST CATON, NEW YORK, ASSIGNOR OF ONE-HALF TO QUINCY W. WELLINGTON, OF CORNING, NEW YORK.

ELECTROCUTION-CHAIR.

SPECIFICATION forming part of Letters Patent No. 587,649, dated August 3, 1897.

Application filed January 6, 1897. Serial No. 618,116. (No model.)

To all whom it may concern:

Be it known that I, EDWIN F. DAVIS, a citizen of the United States, residing at West Caton, Steuben county, State of New York, have invented a certain new and useful Electrocution-Chair, of which the following is a specification.

My invention relates to proper apparatus for carrying out sentences of electrocution in those jurisdictions where such is the method of inflicting the death penalty.

My object is to provide an apparatus which, while being efficient to carry out its purpose, will make automatic registration of the various physical conditions of the criminal while he receives the electric current.

The invention relates particularly to an electrocution-chair which is so arranged that the contraction or expansion of various muscles will be registered while the current is passing through the body. Such records would possess a certain scientific interest and would give an opportunity of accurate observations and deductions of the action of the electric current at high voltages on the human system. Such information, it will be seen, of course could not be obtained in any other way.

In the drawings which illustrate my invention and in which similar letters and numerals of reference indicate similar parts, Figure 1 shows, diagrammatically, the electric connections with my electrocution-chair. Fig. 2 gives a rear view of such chair; and Fig. 3 shows the method of registering the muscular contraction or expansion, being a section on the line of 3 3 through Fig. 2.

A designates an electrical generator of the alternating type, the current in its alternations in one direction being of greater intensity than in the opposite direction. This may be accomplished if the poles of the machine are so wound that their fields vary in intensity. For instance, in a four-pole alternating generator the fields of alternating poles might be wound with half as many turns of wire as those poles whose fields were saturated. The commutators are so arranged as to send the current generated in the armature-coils in passing through the stronger field on the line in one direction and the weaker current in the opposite direction. The varying alternations of the current have the effect of bursting the blood vessels by driving the blood in one direction in the body. If the alternations are of equal intensity, the blood remains in a static condition.

B denotes an exciter for the alternating-current generator A.

C is a rheostat in the circuit of the exciter, which controls the voltage of the machine, so that the current may be changed by one movement from a low potential to the highest potential possible in the machine.

The wires 1 and 2 carry the current from the machine to the chair, one pole being placed at the foot of the chair D and the other pole connected with a cap E, which is fitted upon the head of the criminal. A double-pole switch F of the ordinary type is placed in the circuit to enable the executioner to throw the current on or off suddenly.

G designates a voltmeter, and H an ampere-meter, also of the ordinary type.

The chair, which is insulated, when necessary, from its support, consists of a foot-rest D, a seat I, and a movable back J. The foot-rest may be made, though not shown, adjustable to the height of the person sitting in the chair. The seat I consists of a weighing apparatus, in which i is a movable platform and i' is a register. The back J is hinged at j, and is so connected with the slotted bar j', fastened to the foot-rest at d, that any straightening on the part of the criminal will be registered upon the slotted bar j'. A spring j^2 and a stop-rod j^3 may be used to return the back to position. The bar j' also serves, when the screw-clamp j^4 is screwed down, to hold the back in rigid position. The back also has upon it spring-registers j^5, (shown in Fig. 3 in section and in full,) which are connected with straps adapted to be passed around the arms of the criminal to hold him to the chair. These automatically register any expansion or contraction of the muscles of the arm.

It is obvious that other registers may be added—for instance, to measure the expansion of the chest and of the lower arms—and that registers may be added also to make the same measurements as to the legs; also that

the type of registers may be varied, since sometimes one of the well-known forms of register making a permanent record may be employed.

Though mainly intended for the purpose described, my chair may be used in medical work in connection with less powerful currents, either for experimental purposes or in giving treatment.

Having described my invention, I claim—

1. A chair having in combination with means for passing an electric current through a person seated therein, a foot-rest, a seat registering the weight of an individual, and an adjustable back, substantially as set forth.

2. A chair, having means for registering the changes in physical condition of the body of one sitting in the chair and under the influence of an electric current, substantially as set forth.

3. An electrocution-chair, having means for weighing, means for recording the extension of the body, and means for registering the expansion or contraction of various muscles of one placed in such chair and subjected to an electric current, substantially as set forth.

4. In combination with an electrocution-chair having means for the registering of the changes in physical condition of the person seated therein, of an electromotive device and a rheostat for varying the voltage of electrical current produced by such machine, and means for putting a person seated in said chair in circuit with said machine, substantially as set forth.

5. In combination with an electrocution-chair having means for the registering of the physical condition of the person seated therein, of an electromotive device and a rheostat for varying the voltage of electrical current produced by such machine, a switch for making a breaking-circuit of the said machine, and means for putting a person seated in said chair in circuit with said machine, substantially as set forth.

6. In combination with an electrocution-chair, means for passing an alternating current through a person seated therein, said current having the alternations in one direction of greater intensity than the alternations in the other, substantially as set forth.

This specification signed and witnessed this 31st day of December, 1896.

EDWIN F. DAVIS.

Witnesses:
M. W. ROBBINS,
J. C. ALLEN.